

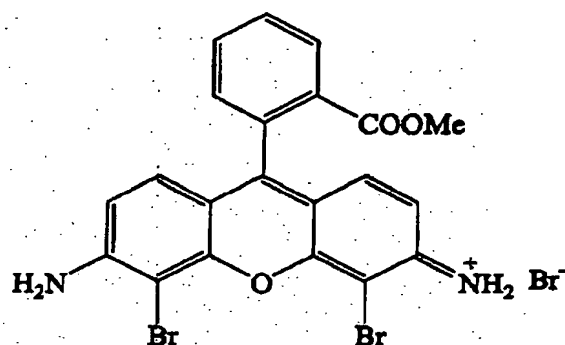
Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

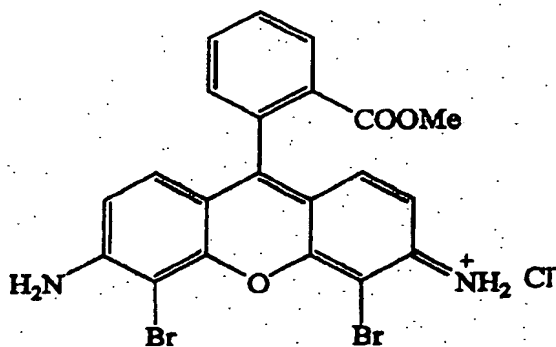
Claims 1 – 48. (Cancelled)

49. (New) An immunologic vaccine comprising PDT-treated cells or fragments thereof or a supernatant thereof, wherein said cells are treated with a photoactivatable compound selected from the group consisting of:



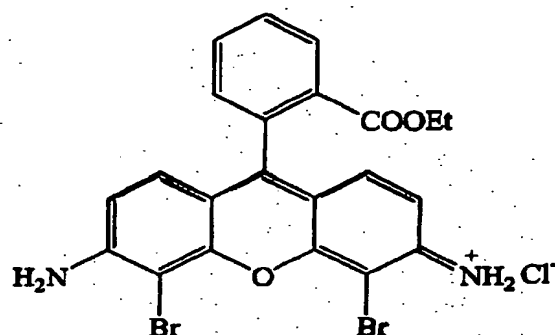
I

4,5-dibromorhodamine 123 hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrobromide),



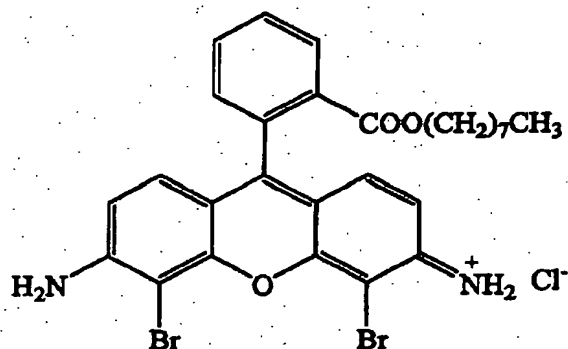
II

4,5-dibromorhodamine 123 hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrochloride),



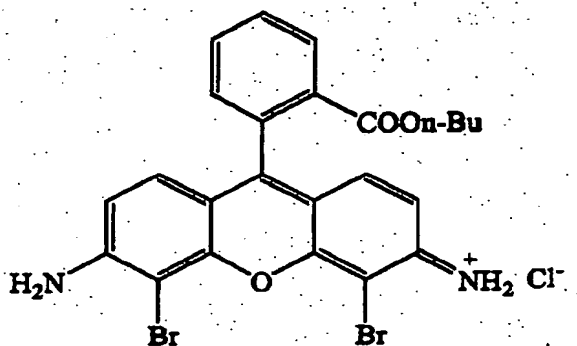
III

4,5-dibromorhodamine 110 ethyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrochloride),



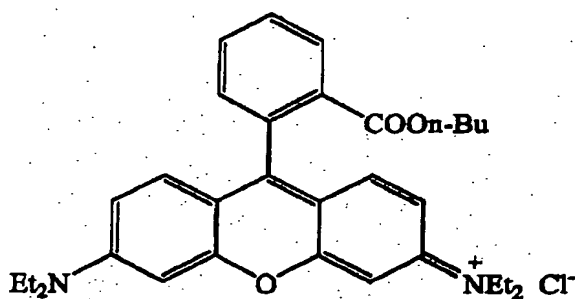
IV

4,5-dibromorhodamine 110 octyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid octyl ester hydrochloride),



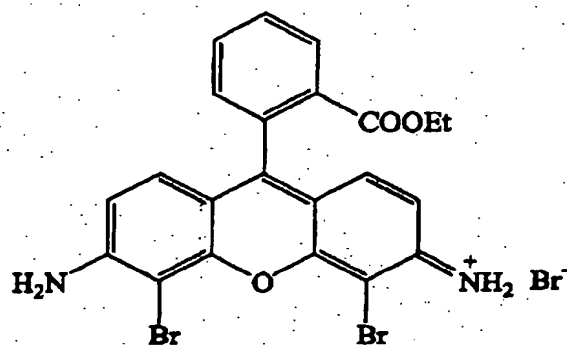
V

4,5-dibromorhodamine 110 n-butyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrochloride),



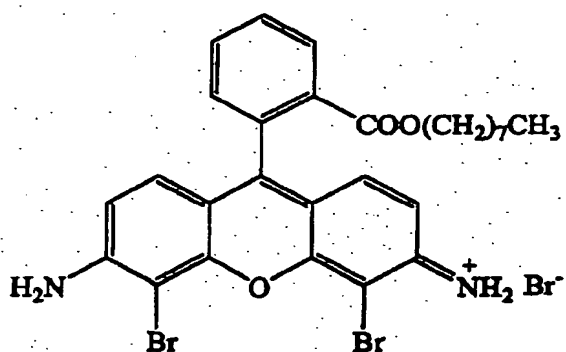
VI

rhodamine B n-butyl ester hydrochloride (2'-(6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrochloride),



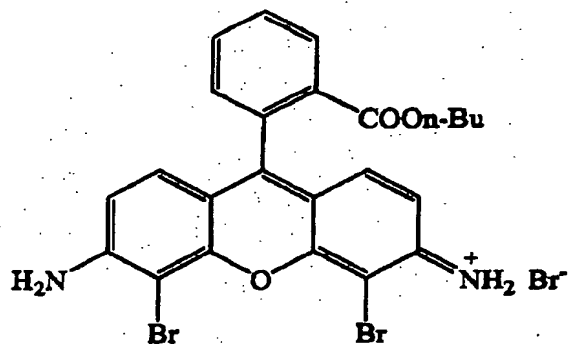
VII

4,5-dibromorhodamine 110 ethyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrobromide),



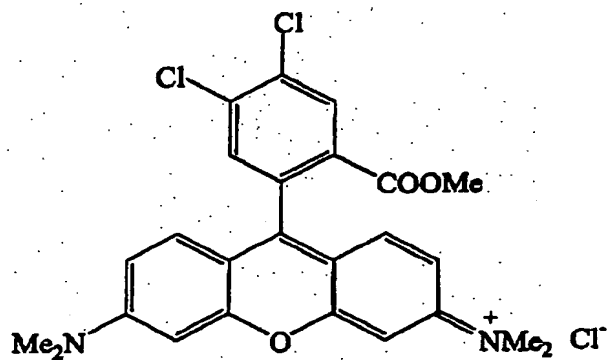
VIII

4,5-dibromorhodamine 110 octyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid octyl ester hydrobromide),



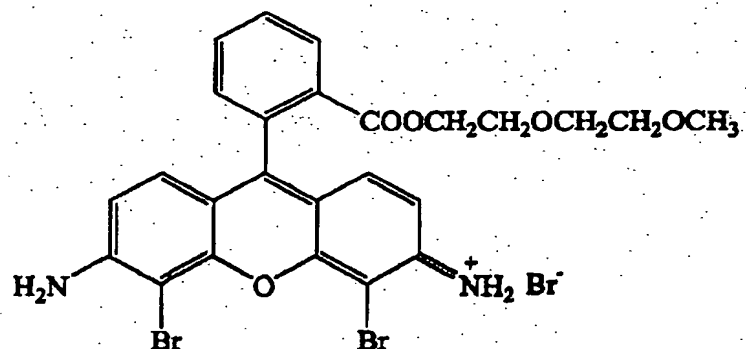
IX

4,5-dibromorhodamine 110 n-butyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrobromide),



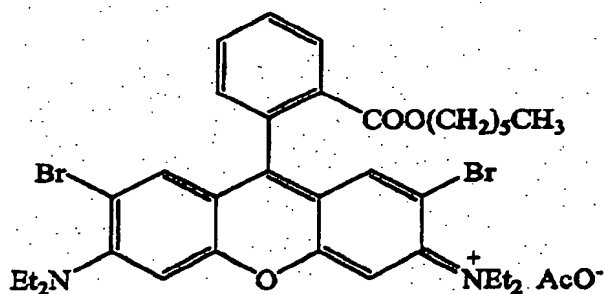
X

4',5'-dichlorotetramethylrhodamine (2'-(6-dimethylamino-3-dimethylimino-3H-xanthen-9-yl)-4',5'-dichloro benzoic acid methyl ester hydrochloride),



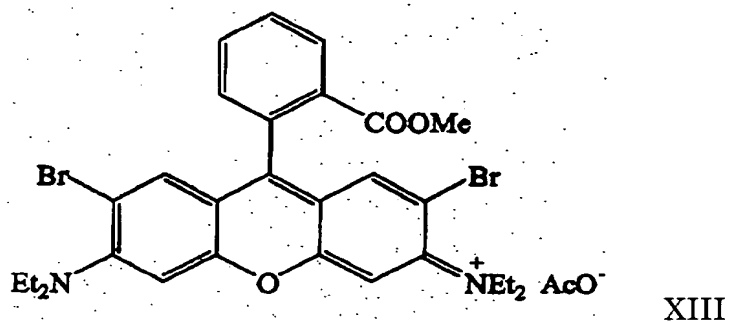
XI

4,5-dibromorhodamine 110 2-(2-methoxy ethoxy)ethyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid 2-(2-methoxy ethoxy) ethyl ester hydrobromide),

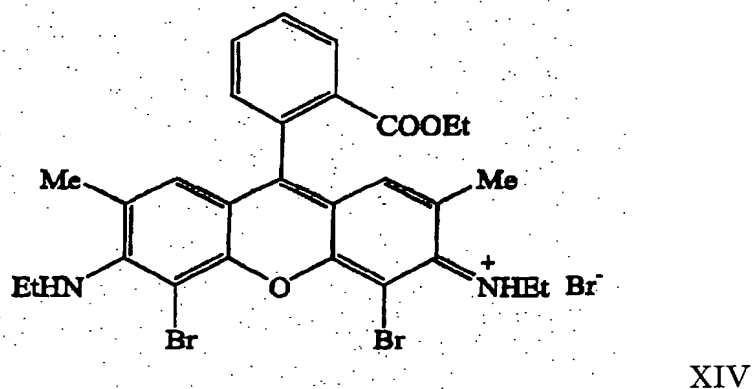


XII

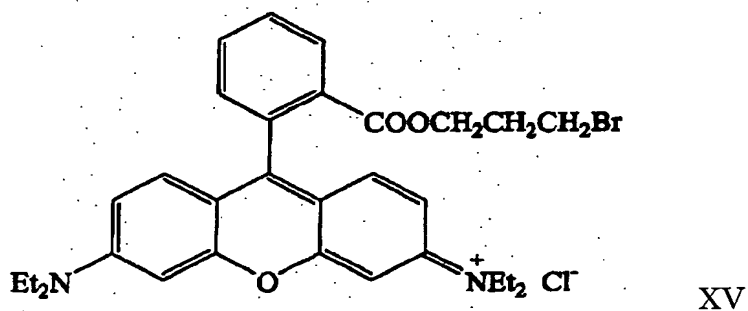
2,7-dibromorhodamine B hexyl ester acetate (2'-(2,7-dibromo-6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid hexyl ester acetate),



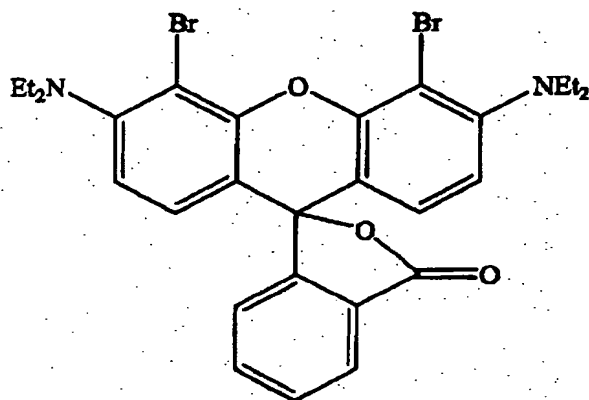
2,7-dibromorhodamine B methyl ester acetate (2'-(2,7-dibromo-6-diethyl amino-3-diethyl imino-3H-xanthen 9-yl)benzoic acid methyl ester acetate),



4,5-dibromorhodamine 6G hydrobromide (2'-(4,5-dibromo-2,7-dimethyl-6-ethylamino-3-ethylimino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrobromide),

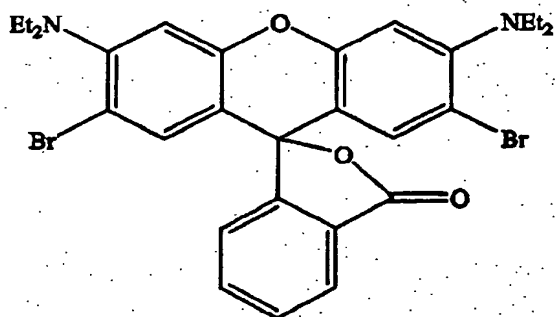


rhodamine B 3-bromopropylester hydrochloride (2'-(6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid 3-bromopropyl ester hydrochloride),



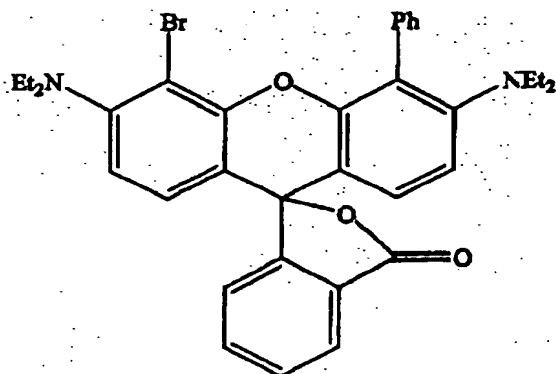
XVI

4,5-dibromorhodamine B base (3,3-(4',5'-dibromo-3'-diethyl amino-6'-diethyl aminoxanthen-9'-yl)-3H-isobenzofuran-1-one),



XVII

2,7-dibromorhodamine B base (3,3-(2',7'-dibromo-3'-diethyl amino-6'-diethyl aminoxanthen-9'-yl)-3H-isobenzofuran-1-one), and

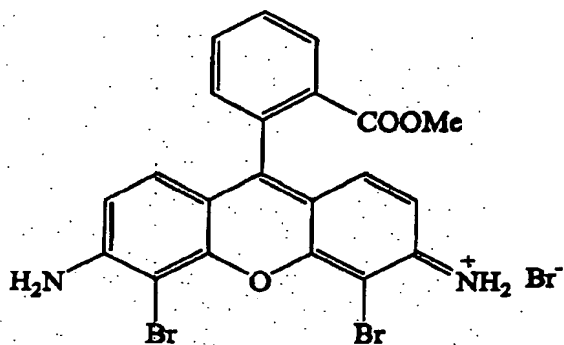


XVIII

4-bromo-7-phenyl-rhodamine B base (3,3-(4'-bromo-3'-diethyl amino-6'-diethyl amino-5'-phenyl xanthen-9'-yl)-3H-isobenzofuran-1-one)

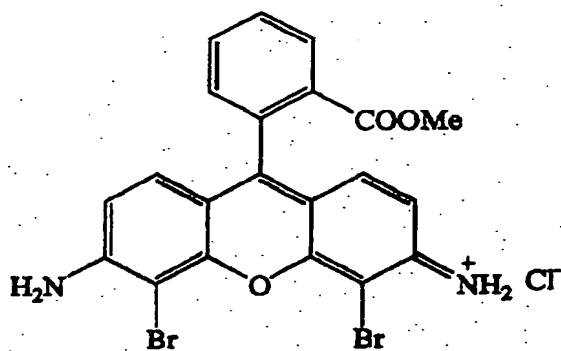
and a pharmaceutically acceptable carrier.

50. (New) The vaccine of claim 49, wherein said photoactivatable compound is selected from the group consisting of



I

4,5-dibromorhodamine 123 hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrobromide) and



II

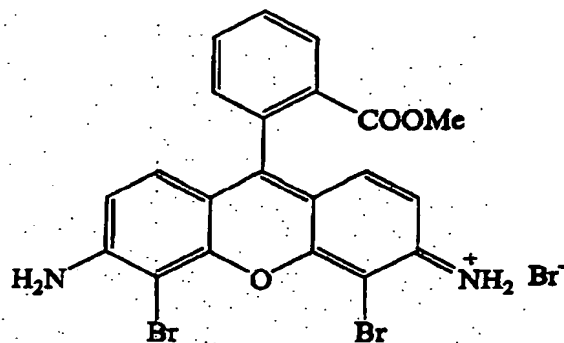
4,5-dibromorhodamine 123 hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrochloride).

51. (New) The vaccine of claim 49, wherein said compound is activatable by a light having a wavelength in the range of about 400 to about 800 nm.

52. (New) The vaccine of claim 51, wherein said wavelength is in the range of about 450 to about 600 nm.

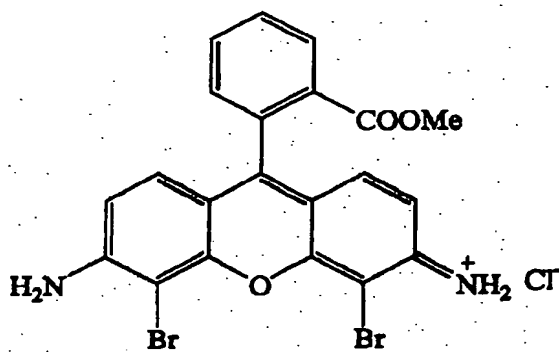
53. (New) A method of preparing an immunologic pharmaceutical formulation for inhibition, protection or treatment of an immunological disorder, infection or a cancer in an individual, comprising the steps of :

a) treating cells with a photoactivatable compound selected from the group consisting of:



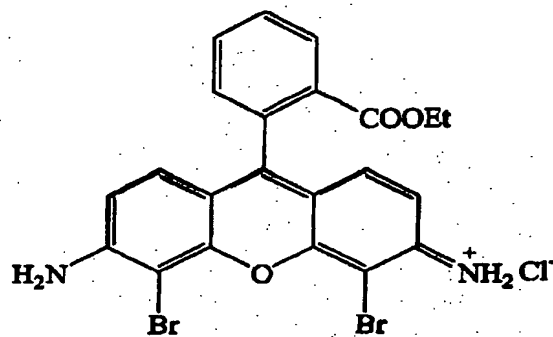
I

4,5-dibromorhodamine 123 hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrobromide),



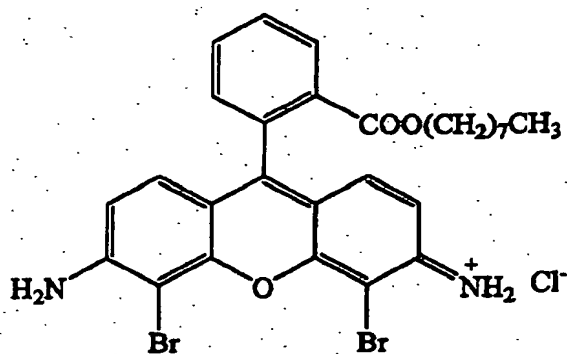
II

4,5-dibromorhodamine 123 hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrochloride),



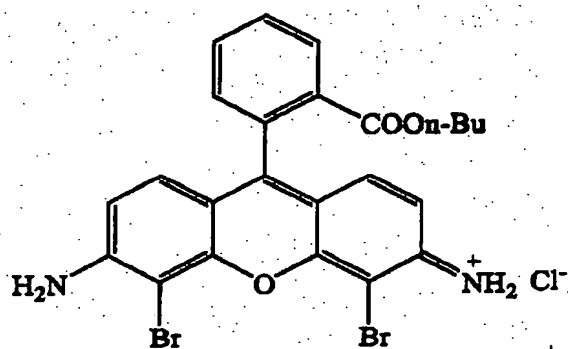
III

4,5-dibromorhodamine 110 ethyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrochloride),



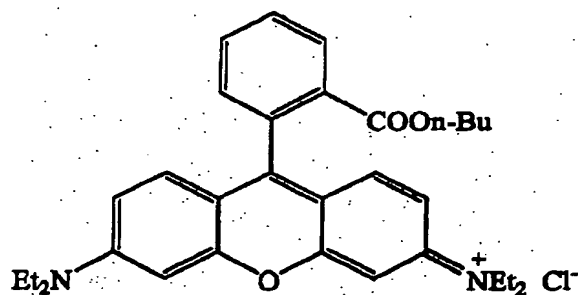
IV

4,5-dibromorhodamine 110 octyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid octyl ester hydrochloride),



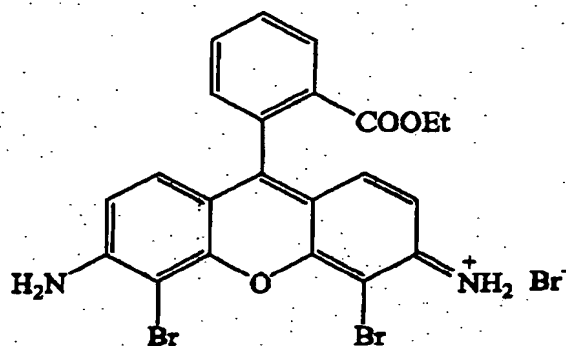
V

4,5-dibromorhodamine 110 n-butyl ester hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrochloride),



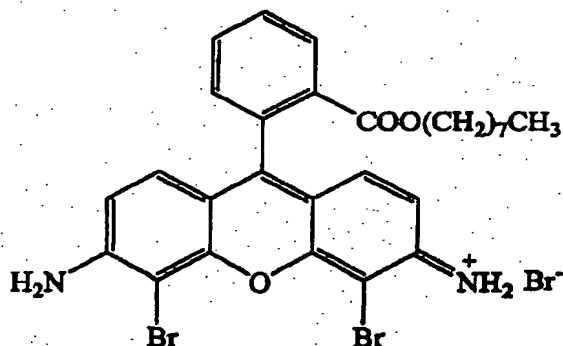
VI

rhodamine B n-butyl ester hydrochloride (2'-(6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrochloride),



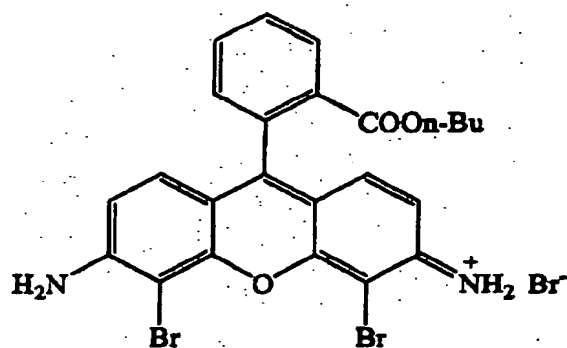
VII

4,5-dibromorhodamine 110 ethyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrobromide),



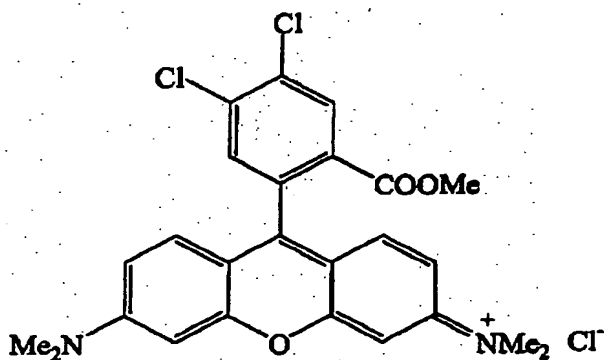
VIII

4,5-dibromorhodamine 110 octyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid octyl ester hydrobromide),



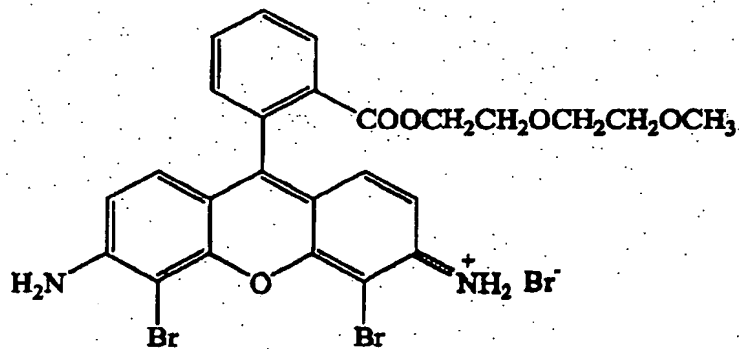
IX

4,5-dibromorhodamine 110 n-butyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)benzoic acid n-butyl ester hydrobromide),



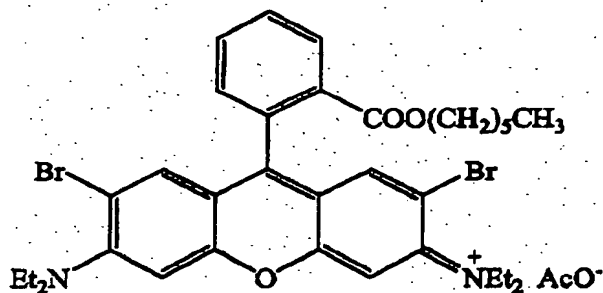
X

4',5'-dichlorotetramethylrhodamine (2'-(6-dimethylamino-3-dimethylimino-3H-xanthen-9-yl)-4',5'-dichloro benzoic acid methyl ester hydrochloride),



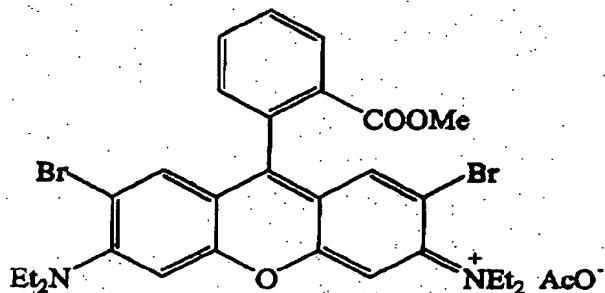
XI

4,5-dibromorhodamine 110 2-(2-methoxy ethoxy)ethyl ester hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid 2-(2-methoxy ethoxy) ethyl ester hydrobromide),



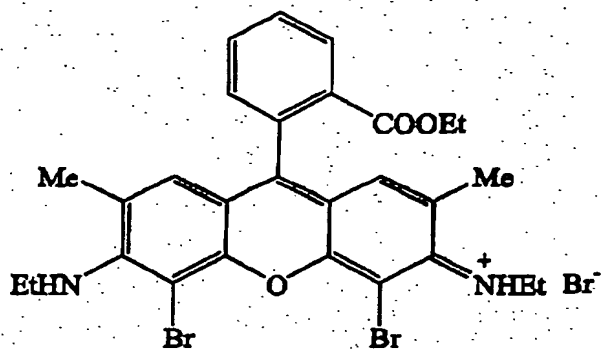
XII

2,7-dibromorhodamine B hexyl ester acetate (2'-(2,7-dibromo-6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid hexyl ester acetate),



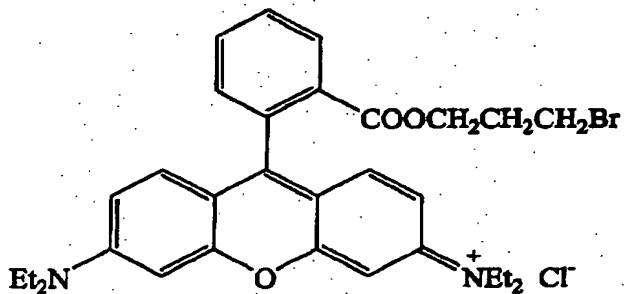
XIII

2,7-dibromorhodamine B methyl ester acetate (2'-(2,7-dibromo-6-diethyl amino-3-diethyl imino-3H-xanthen 9-yl)benzoic acid methyl ester acetate),



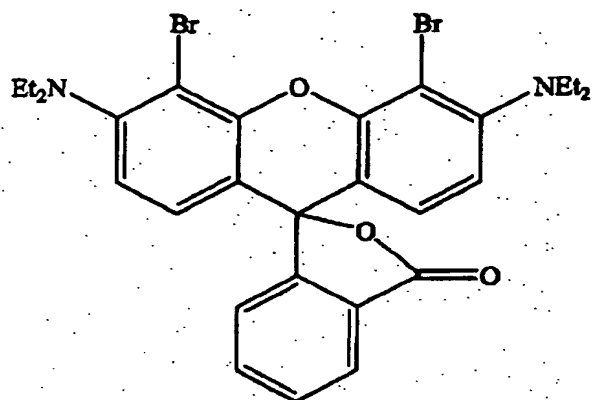
XIV

4,5-dibromorhodamine 6G hydrobromide (2'-(4,5-dibromo-2,7-dimethyl-6-ethylamino-3-ethylimino-3H-xanthen-9-yl)benzoic acid ethyl ester hydrobromide),



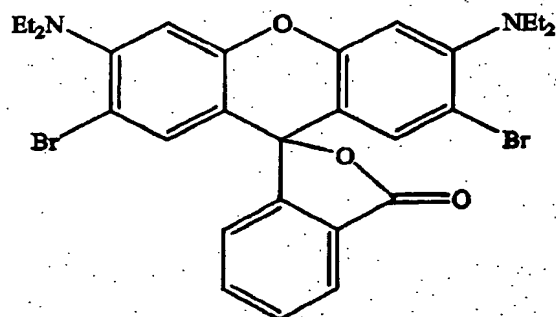
XV

rhodamine B 3-bromopropylester hydrochloride (2'-(6-diethyl amino-3-diethyl imino-3H-xanthen-9-yl)benzoic acid 3-bromopropyl ester hydrochloride),



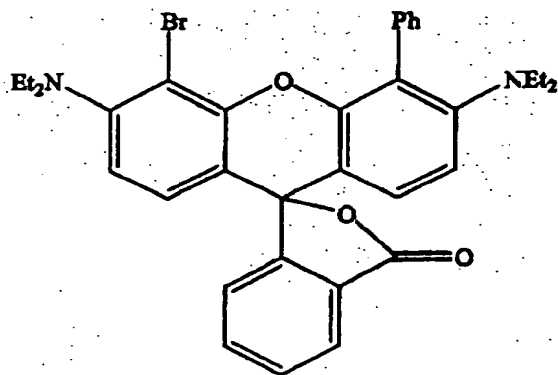
XVI

4,5-dibromorhodamine B base (3,3-(4',5'-dibromo-3'-diethyl amino-6'-diethyl aminoxanthen-9'-yl)-3H-isobenzofuran-1-one),



XVII

2,7-dibromorhodamine B base (3,3-(2',7'-dibromo-3'-diethyl amino-6'-diethyl aminoxanthen-9'-yl)-3H-isobenzofuran-1-one), and



XVIII

4-bromo-7-phenyl-rhodamine B base (3,3-(4'-bromo-3'-diethyl amino-6'-diethyl amino-5'-phenyl xanthen-9'-yl)-3H-isobenzofuran-1-one).

and

b) subjecting said cells to a light to activate said photoactivatable compound, thereby obtaining PDT-treated cells or fragments thereof or a supernatant thereof.

54. (New) The method of claim 53, wherein said immunologic pharmaceutical formulation is an autoimmune vaccine.

55. (New) The method of claim 53, wherein said immunological disorder is an alloimmune disorder or an autoimmune disorder.

56. (New) The method of claim 55, wherein said alloimmune disorder is Graft-versus-Host Disease or an organ rejection.

57. (New) The method of claim 55, wherein said autoimmune disease is selected from the group consisting of Rheumatoid Arthritis, Multiple Sclerosis, Scleroderma, Lupus, Autoimmune Hemolytic Anemia, Diabetes Mellitus, Progressive Systemic Sclerosis, Idiopathic Thrombocytopenic Purpura, Psoriasis, Ulcerative Colitis and Crohn's Disease.

58. (New) The method of claim 53, wherein said infection is caused by a bacteria, a virus, a parasite, a fungus, a prion or a protozoan.

59. (New) The method of claim 58, wherein said virus is selected from the group consisting of Human Immunodeficiency Virus (HIV), Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), Human Herpes Virus Type I or II, and Varicella Zoster.

60. (New) The method of claim 53, wherein said infection causes Chagas' Disease.

61. (New) The method of claim 53, wherein said cancer is selected from the group consisting of solid tumors and hematologic tumors.

62. (New) The method of claim 61, wherein said solid tumors are of breast cancer, lung cancer, gastrointestinal cancer, skin cancer or of genitourinary, neurological, head and neck or musculoskeletal origin.

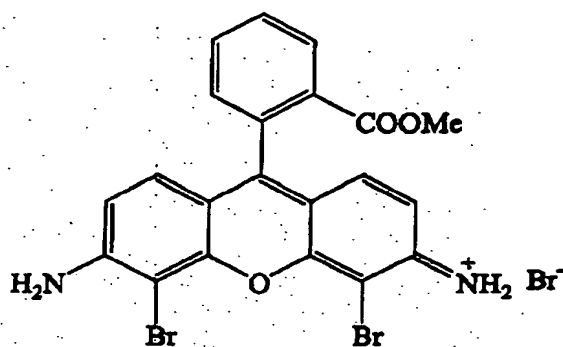
63. (New) The method of claim 61, wherein said hematologic tumors are lymphomas, leukemias, myelomas, myelodysplasias or plasma cell dyscrasias.

64. (New) The method of claim 53, wherein said treatment of said individual cells is effected *ex vivo*.

65. (New) The method of claim 64, wherein said treatment is an *ex vivo* treatment effected by perfusion.

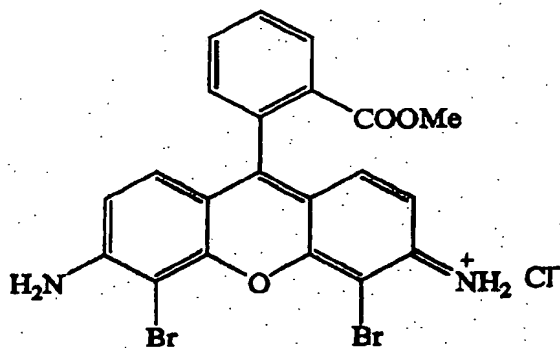
66. (New) The method of claim 53, wherein said treatment of said individual cells is effected *in vivo*.

67. (New) The method of claim 53, wherein said photoactivatable compound is selected from the group consisting of :



I

4,5-dibromorhodamine 123 hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrobromide) and



II

4,5-dibromorhodamine 123 hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrochloride).

68. (New) The method of claim 53, wherein said light has a wavelength in the range of about 400 to about 800 nm.

69. (New) The method of claim 68, wherein said wavelength is in the range of about 450 to about 600 nm.

70. (New) A method of inhibiting or treating an immunological disorder, infection or a cancer in an individual, the method comprising the step of administering to an individual in need thereof an effective amount of a pharmaceutical formulation according to claim 53.

71. (New) The method of claim 70, wherein said immunologic disorder is an autoimmune disorder.

72. (New) The method of claim 70, wherein said immunological disorder is an alloimmune disorder.

73. (New) The method of claim 72, wherein said alloimmune disorder is Graft-versus-Host Disease or an organ rejection.

74. (New) The method of claim 71, wherein said autoimmune disorder is selected from the group consisting of Rheumatoid Arthritis, Multiple Sclerosis, Scleroderma, Lupus, Autoimmune Hemolytic Anemia, Diabetes Mellitus, Progressive Systemic Sclerosis, Idiopathic Thrombocytopenic Purpura, Psoriasis, Ulcerative Colitis and Crohn's Disease.

75. (New) The method of claim 70, wherein said infection is caused by a bacteria, a virus, a parasite, a fungus, a prion or a protozoan.

76. (New) The method of claim 75, wherein said virus is selected from the group consisting of Human Immunodeficiency Virus (HIV), Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), Human Herpes Virus Type I or II, and Varicella Zoster.

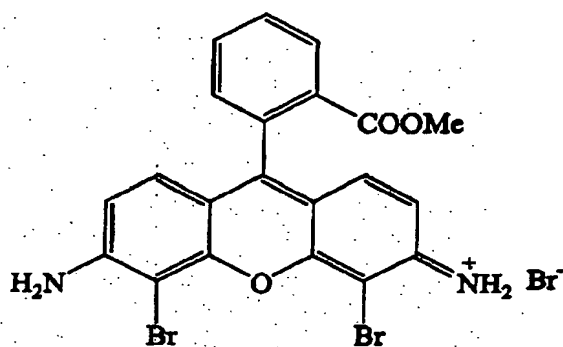
77. (New) The method of claim 70, wherein said infection causes Chagas' Disease.

78. (New) The method of claim 70, wherein said cancer is selected from the group consisting of solid tumors and hematologic tumors.

79. (New) The method of claim 78, wherein said solid tumors are of breast cancer, lung cancer, gastrointestinal cancer, skin cancer or of genitourinary, neurological, head and neck or musculoskeletal origin.

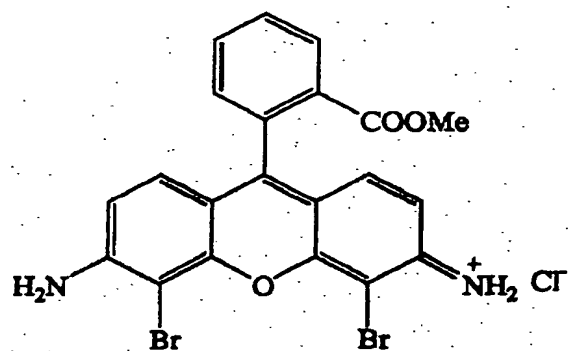
80. (New) The method of claim 78, wherein said hematologic tumors are lymphomas, leukemias, myelomas, myelodysplasias or plasma cell dyscrasias.

81. (New) The method of claim 70, wherein said photoactivatable compound is selected from the group consisting of :



I

4,5-dibromorhodamine 123 hydrobromide (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrobromide) and



II

4,5-dibromorhodamine 123 hydrochloride (2'-(6-amino-4,5-dibromo-3-imino-3H-xanthen-9-yl)-benzoic acid methyl ester hydrochloride).